NEW YORK STATE

DEPARTMENT OF TRANSPORTATION

Materials Bureau

"SAMPLING AND STOCK LOT CONTROL

of

PREFORMED ELASTIC JOINT SEALER"

I. INTRODUCTION

This method describes specific procedures for the SAMPLING AND STOCK LOT CONTROL of PREFORMED ELASTIC JOINT SEALER manufactured for Department projects. It encompasses an inventory control system whereby material is accepted in stock lots for eventual shipment to Department projects thereby eliminating the need for individual shipment inspection and jobsite sampling. This procedure benefits Department projects by assuring that acceptable material is available for incorporation into project work. The control system is implemented by sampling and testing material in stock lots as it is manufactured. After sampling and proper identification, thru the use of Department seals, the material is tested by the Department. If found acceptable, it is identified as such and released for shipment to Department projects as required.

II. DEFINITIONS

1. Manufacturer

   A company actually engaged in the production of Preformed Elastic Joint Sealer at a given location.

2. Department

   The New York State Department of Transportation.

3. Materials Bureau

   A facility of the New York State Department of Transportation which may be contacted by mailing to:

   Harry H. McLean,
   Director of Engineering Materials
   Lab. Bldg., 1220 Washington Avenue
   Bldg. #7, State Campus
   Albany, New York 12226

or

Telephoning the Product Control Office at:

Area Code 518 Number 457-5642

or

T.W.X. to: 710-441-88221
N.Y.S. D.o.T., Albany Campus
Materials Bureau, P.C.O.

4. Inspection Authority

An office designated by the Materials Bureau as responsible for inspection control on behalf of the Department at specific manufacturers.

5. Plant Inspector

An individual employed by the Inspection Authority and approved by the Materials Bureau to function on inspection assignments on behalf of the Department.

6. Project Inspector

An individual assigned by the Department's Project Engineer to function on inspection assignments at the project.

7. Preformed Elastic Joint Sealer, Joint Sealer or Sealer

Terms used to refer to any or all of the following preformed elastic joint sealers:

a. Longitudinal Highway Joint Sealer.
b. Transverse Highway Contraction Joint Sealer.
c. 1 5/8 inch Highway Expansion Joint Sealer
d. Bridge Joint Sealers.

8. Packaging Units

a) Cartons made of durable material containing sealer wound in coils or on spools.

b) Small Reels made of wood or metal and wound with sealer and encircled with a cardboard covering. The ends of the covering should be joined together with strong tape, or the covering may be secured in place with encircling metal bands.

Note: The term small reel describes a reel approximately four feet in diameter, three feet in width and should not be confused with a large

telephone cable reel of approximately eight feet diameter and five feet width.

c) Telephone Cable Reels made of wood or metal and wound with sealer and encircled with a firmly banded cardboard cover.

d) Pallets containing coils or lengths of sealer banded to the pallet with cardboard between the sealer and bands.

The maximum amount of sealer contained in/on each type of packaging unit is given in the table below.

Joint Sealer Type	Carton or Small Reel	Telephone Cable Reel	Pallet
Longitudinal Highway	1500'	Not Allowed*	Not Allowed*
Transverse Highway Contraction	600'	5000'	Not Allowed*
1 5/8 inch Highway Expansion	600'	5000'	Not Allowed*
Bridge	No Maximum	4000'	No Maximum

* NOT ALLOWED - signifies packaging that cannot be used for that type of sealer.

9. Lot

A lot shall consist of one specific size and style of preformed elastic joint sealer produced in a reasonably continuous manner and shall be made up of one or more carton(s) or small reel(s) of sealer

or

for Transverse Highway Contraction, Bridge, or 1 5/8" Highway Expansion Joint Sealer, one large telephone cable reel of sealer

or

for Bridge Sealer one or more pallets of sealer.

10. Sample Frequency

The number of small reels or cartons (Packaging other than telephone cable reels or pallets) of joint sealer to be sampled for each lot is outlined in the following sample table:

NYSDOT
Library
50 Wolf Road, POD 34
Albany, New York 12232

Sampling Table

Lot Size (No. of Reels or cartons)	Number of Units Sampled	Lot rejection will occur when the number of sample failures equal or exceeds
1-50	5 (See Note 2)	1
51-150	20	2
151-280	32	3
281-500	50	4

Note 1: When telephone cable reels or pallets are used for packaging, the rate of sampling is given under the definition of "Sample Size" below.

Note 2: When the number of units to be sampled exceeds the lot size, sample all units in the lot.

11. Sample Size

The quantity of sealer cut from each unit selected for sampling is shown in the following table:

Joint Sealer Type	Carton or Small Reel	Telephone Cable Reel	Pallet
Longitudinal	* 5' - 9' lengths	Not Applicable	Not Applicable
Transverse Highway Contraction	9'	2 - 9 foot lengths; one from each end of the sealer	Not Applicable
1 5/8 in. Highway Expansion	9'	2 - 9 foot lengths	Not Applicable
Bridge	3'	3'	3' for Pallets containing 120' or less. 15 additional inches when more than 120'

12. Manufacturer's Extrusion Mark

A manufacturer's identification mark extruded on all joint seal produced for Department use. This mark must be registered with the Rubber Manufacturers Association Inc. or with the Materials Bureau.

* Revised Material

13. Seals

Tape and metal devices, as described below, to insure content security of packages of Preformed Elastic Joint Sealer. These seals are furnished to the Inspector by the Department.

a. Red Tape Seal

A red tamper proof tape seal imprinted "N.Y.S. SAMPLED".

b. Green Tape Seal

A green tamper proof tape seal imprinted "N.Y.S. ACCEPTED".

c. Red Metal Seal

A red metal tamper proof seal imprinted "N.Y.S. SAMPLED".

d. Green Metal Seal

A green metal tamper proof seal imprinted "N.Y.S. ACCEPTED".

14. Forms

The following forms are published and issued by the Department for use by the Materials Bureau and Inspection Authorities.

a. BR-240, Sample and Acceptance Transmittal

This form transmits the Inspector's sample information to the Materials Bureau and upon validation conveys acceptance action to the Inspector. Detailed instructions for proper completion and transmittal are contained in Materials Method 18.1.

b. BR-241, Transmittal Envelope

This is a heavy duty envelope used to contain the form BR-240.

III. EVIDENCE OF ACCEPTABILITY

1. At Manufacturing Plant

A green copy of Form BR-240 in the possession of the Inspector, properly noted with the word "accepted" and validated by the Materials Bureau.

2. At Project Location

a. Each package sealed as follows:

(1) Carton

Four red tape seals, two sealing the top and two sealing the bottom of the carton and two green tape seals affixed to the side of the carton containing the labelling information.

(2) Small Reel

Two red and two green tape seals securing the ends of the encircling cardboard covering, or if metal bands are used to hold the cover in place, one red and one green tape seal across each metal band securing the band to the cardboard covering.

(3) Telephone Cable Reel

One red and one green tape seal across each metal band sealing the band to the cardboard covering.

(4) Pallet

Two red and two green tape seals across the metal bands sealing the band to the cardboard covering.

b. The lot number imprinted on the joint sealer.

c. Presence of the following identifying information on all cartons, reels or pallets:

(1) Size and style of sealer as shown on the appropriate Standard Sheet or Bridge Design Sheet.

(2) N.Y.S. D.o.T. Material Designation.

(3) Lot Number

(4) Test Number

(5) Acceptance Date

(6) Date of Manufacture

(7) Footage contained in the packaging unit.

(8) Manufacturer's name and address

Generally this information may be found in the following locations:

(1) Cartons and Reels

Printed on the side

(2) Pallets

Printed on the cardboard placed between the joint sealer and the metal bands.

IV. STEPS IN PROCEDURE

Part A - Sampling and Stock Lot Control of Cartons and Small Reels of Sealer.

Part B - Sampling and Stock Lot Control of Telephone Cable Reels of Sealer.

Part C - Sampling and Stock Lot Control of Pallets of Sealer.

A. SAMPLING AND STOCK LOT CONTROL OF CARTONS AND SMALL REELS OF SEALER

Responsibility	Action
Manufacturer	1. Assigns a lot number to the sealer to be produced.
	a. Lot numbers are assigned to each lot offered for Department work, regardless of type or item, in a series starting at the beginning of each calendar year.
	2. Produces the required sealer.
	a. All sealer produced must contain the Manufacturer's extrusion mark in the sealer and the lot number printed indelibly on the sealer at no less than three foot intervals.
	3. Packages the sealer in cartons or on small reels as described under definition Packaging Unit on page No. 2.

STEPS IN PROCEDURE (continued)

Responsibility	Action
	4. Labels the side of each unit indelibly with the following information:
	a. Size and Style of sealer, as shown on appropriate Standard sheet or Bridge Design sheet.
	b. N.Y.S. D.o.T. Materials Designation.
	c. Lot Number
	d. Date of Manufacturer
	e. Footage contained in the packaged unit.
	f. Manufacturer's name and address
	5. Stores the material in an easily accessible location.
	6. Notifies the Inspection Authority designated by the Department that a lot of material is ready for sampling.
Inspection Authority	7. Schedules an inspection call.
	8. Assigns an Inspector to make a call.
Plant Inspector	9. Ascertains that the material is stored in an accessible location.
	10. Determines that the sealer is packaged according to the definitions of Lot and Packaging Unit on page No(s) 2 & 3.
	11. Determines that each unit is labeled as described in step 4 above.
	12. Counts the number of units in the lot.
	13. Consults the term Sample Frequency under definitions on page No. 3 to determine the number of units to be sampled.

STEPS IN PROCEDURE (continued)

Responsibility	Action
Plant Inspector (cont'd.)	14. Numbers each unit by actually marking each, or by mentally designating a number to each.
	15. Consults the random number table for the numbers of the units to be sampled. The table and instructions for its use are on page No. 18.
	16. Designates the units to be sampled.
Manufacturer	17. Removes from storage and unwraps the designated units.
Plant Inspector	18. Cuts a nine foot sample from each unit of highway sealer selected or a three foot sample from each unit of bridge sealer selected.
	a. The sample shall be cut from the end of the coil, spool or reel of sealer.
	19. Marks each sample indelibly with the manufacturer's name and the date of manufacture of the unit from which the sample was cut.
	20. Supervises the repackaging of the sampled units.
	21. Seals each unit in the lot by applying the following seals:
	a. Cartons - Two red tape seals to the top and two red tape seals to the bottom of each carton.
	b. Small Reels - Two red tape seals securing the ends of the encircling cardboard covering, or if metal bands are used to hold the cover in place, one red tape seal across each metal band securing the band to the cardboard cover.

STEPS IN PROCEDURE (continued)

Responsibility	Action
Plant Inspector (cont'd.)	22. Completes Form BR-240 according to Materials Method N.Y. 18.1. Includes in Box #16 the following: a. Size and Style of sealer. b. Number of units in the lot. c. Number of units sampled.
	23. Packages samples, includes Form BR-240 enclosed in BR-241 envelope and forwards to the Materials Bureau. a. If transmitted by means not authorized by the Materials Bureau, such as air freight, expense must be borne by the manufacturer. b. If samples are transmitted by the manufacturer, box #16 of the BR-240 shall be noted, "Sample sent by Manufacturer" and each piece of the sample must be sealed by the Inspector, using a red metal seal on a wire passing through a hole punched in each piece.
	24. Makes the necessary entries in his records as to manufacturer, product type, material designation, date sampled, etc.
	25. Transmits the samples for testing to the Materials Bureau.
Materials Bureau	26. Performs required tests and accepts or rejects the lot on the basis of test results.
	27. Indicates action on and validates Form BR-240.
	28. Issues green and yellow copies of Form BR-240 to Inspection Authority. a. Telephone requests to the Materials Bureau, in advance of normal notification of action, will be honored only when received from the Inspector.

STEPS IN PROCEDURE (continued)

Responsibility	Action
Inspection Authority	29. Receives green and yellow copies of Form BR-240, marked accepted or rejected and validated, from the Materials Bureau.
	30. Retains the yellow copy and advances the green copy of Form BR-240 to the Inspector.
	31. Notifies the manufacturer of action taken by the Materials Bureau and provides acceptance information for completion of labeling.
	a. If the material is REJECTED: on a subsequent routine visit to the plant, the Inspector will remove all red tape seals from the units of the rejected lot.
	32. Arranges for an Inspection call to check labeling and seal acceptable units.
Plant Inspector	33. Checks that the manufacturer has indelibly labeled each unit with the test number and the date of acceptance.
	NOTE: At the manufacturers convenience, labeling may be accomplished previous to or coincident with the application of green seals.
	34. Applies green tape seals to each unit as follows:
	a. Cartons - two green tape seals to the side of the carton containing the labeling.
	b. Small Reels - two green tape seals securing the ends of the encircling cardboard covering, or if metal bands are used to hold the covering in place, one green tape seal across each metal band securing the band to the cardboard covering.

STEPS IN PROCEDURE (continued)

Responsibility	Action
Manufacturer	35. Makes shipments from the accepted lot without further documentation or supervision of the Inspector.
	36. Maintains a record of shipments of all Department accepted material. These records should include Department's material designation, test number, lot number, quantities shipped and shipping destination.
	37. Provides shipment record to the Department upon request.
Project Inspector	38. Satisfies himself that the required seals, as described under "Evidence of Acceptability," on page 5 are intact on each unit.
	39. Consults MURK for additional information concerning acceptances.

B. SAMPLING AND STOCK LOT CONTROL OF TELEPHONE CABLE REELS OF SEALER.

FOR THIS PROCEDURE FOLLOW ALL STEPS GIVEN IN PROCEDURE A, "STOCK LOT CONTROL OF CARTONS, AND SMALL REELS OF SEALER" EXCEPT FOR THE STEPS INDICATED AS REPLACED BY THE STEPS GIVEN BELOW.

1. Packaging by the Manufacturer of Joint Sealer on Cable Reels (Replaces Step 3 of Procedure A.)

The Manufacturer may elect to package Transverse Highway Joint Sealer or Bridge Joint Sealer on telephone cable reels in accordance with the definition 8c "Packaging Unit - Telephone Cable Reel" found on page No. 3 . When packaging Transverse Highway Sealer enough sealer must be threaded through a hole in the center of the reel to allow the Inspector to take a nine foot sample.

The end of the length of joint sealer on the reel may pass between the cardboard covering and the edge of the reel to facilitate taking a sample without removing the cardboard covering.

STEPS IN PROCEDURE (continued)

The amount of Bridge Sealer allowed on one reel shall not exceed eight hours of continuous production.

The only natural breaks allowed in a reel of Bridge Sealer shall be quantity control breaks.

2. Labeling of Cable Reels of Joint Sealer by the Manufacturer (Replaces Step 4 of Procedure A)

The side of each reel shall be indelibly labeled with the following information:

a. Size and Style of sealer, as shown on appropriate Standard sheet or Bridge Design sheet.

b. N.Y.S. D.o.T. Materials Designation

c. Lot Number

d. Date of Manufacture

e. Footage contained on the reel.

f. Manufacturer's name and address.

3. Sampling Cable Reels of Joint Sealer by the Plant Inspector (Replaces Steps 13 through 18, 22b, and 22c)

Transverse Highway Joint Sealer shall be sampled by cutting two nine-foot lengths, one from the end of joint sealer threaded through the center of the reel and the second from the other end of the joint sealer on the reel.

Bridge Joint Sealer shall be sampled by securing a three foot sample from the end of sealer on the reel.

Each cable reel of joint sealer shall be sampled as a separate lot. In the case where two reels have the same lot number, they should be distinguished by the reel number. Form BR-240 shall be executed for each reel and should include both the lot and reel number.

All unwrapping or rewrapping of the reel shall be done by the manufacturer under direction of the Inspector. The manufacturer shall also provide any aid necessary for the Inspector in securing the sample(s).

4. Security Sealing Sampled Cable Reels of Joint Sealer by the Plant Inspector (Replaces Step 21 of Procedure A)

One red tape seal shall be placed across each metal band

STEPS IN PROCEDURE (continued)

securing the band to the cardboard covering. Any end of joint sealer not secured by the cardboard covering shall be secured by attaching a red metal seal to a sealing wire passing through a hole in the end of the joint sealer.

5. Security Sealing and Labeling Accepted Cable Reels of Joint Sealer (Replaces Steps 33 and 34 of Procedure A.).

The Plant Inspector shall secure accepted reel(s) by placing one green tape seal across each metal band, securing the band to the cardboard covering. At this time, the Inspector shall supervise the manufacturer in labeling the side of the reel with the test number and date of acceptance.

6. Shipment of Cable Reels of Transverse Highway Joint Sealer by the Manufacturer (Replaces Step 35).

After application of green tape seals accepted reel of Transverse Highway Joint Sealer may be shipped to a supply location or Department project without supervision by the Plant Inspector. Any transfer of reels between projects will be handled at the project level as covered under "Manual For Uniform Reported Keeping" (M.U.R.K.).

7. The Repackaging of Cable Reels of Bridge Sealer at the Manufacturer's Plant (Replaces Step 35).

After application of the green tape seals accepted reels of bridge sealer may be shipped to supply location or Department project without further inspection, or the reels of Bridge sealer may be repackaged into cartons under the supervision of the Plant Inspector. The cartons shall be labeled by the manufacturer and sealed by the Inspector as described under Procedure A, "Stock Lot Control of Cartons and Small Reels of Sealer".

During the repackaging operation check samples shall be taken from the sealer on the reel as follows:

1. At the first repackaging operation from any material left on the reel.

2. At any natural breaks in the sealer which may occur during later repackaging operations.

Note: Natural breaks are those resulting from Quantity Control samples taken by the manufacturer.

STEPS IN PROCEDURE (continued)

After each repackaging operation, if any sealer remains on the reel, the reel shall be repackaged and resealed with red and green tape seals as described in earlier parts of section.

Any Bridge Sealer repackaged into cartons or any resealed cable reels of Bridge Sealer may be shipped by the manufacturer without the presence of the Plant Inspector.

C. SAMPLING AND STOCK LOT CONTROL OF PALLETS OF SEALER.

FOR THIS PROCEDURE FOLLOW ALL STEPS GIVEN IN PROCEDURE A. "STOCK LOT CONTROL OF CARTONS AND SMALL REELS OF SEALER" EXCEPT FOR THE STEPS INDICATED AS REPLACED BY THE STEPS GIVEN BELOW.

1. Packaging by the Manufacturer of Sealer on Pallets (Replaces Step 3 of Procedure A.).

The manufacturer may elect to package bridge sealer on pallets in accordance with definition 8d, "Packaging Unit-Pallet" found on page No. 3 . When banding the sealer to pallets enough cardboard material should be placed between the bands and the sealer to prevent the bands from cutting the sealer.

2. Labeling by the Manufacturer of Pallets of Sealer (Replaces Step 4 of Procedure A.).

The following information shall be printed indelibly on the cardboard placed between the bands and sealer:

a. Size and Style of sealer, as shown on appropriate Standard Sheet or Bridge Design Sheet.

b. N.Y.S. D.o.T., Materials Designation.

c. Lot Number

d. Date of Manufacturer

e. Footage contained on the pallet.

f. Manufacturer's name and address.

3. Sampling of Pallets of Sealer by the Plant Inspector (Replaces Steps 13 through 18, 22b and 22c of Procedure A.).

Each pallet of Bridge Sealer shall be sampled as follows:

STEPS IN PROCEDURES (continued)

a. Pallets Containing 120 Feet or Less of Sealer.

Three feet of sealer shall be cut from the end of a length of sealer.

b. Pallets Containing More than 120 Feet of Sealer.

Three feet of sealer shall be cut from the end of a length of sealer and fifteen additional inches from the end of another length or if the pallet contains only one piece of sealer, from the end of sealer not previously sampled.

When submitting the samples to the Materials Bureau the accompanying Form BR-240 shall be noted with the number of pallets sampled and the amounts sampled from each pallet.

4. Application by the Plant Inspector of Security Seals to Sampled Pallets of Sealer (Replaces Step 21 of Procedure A.)

Each pallet shall be secured by applying two red tape seals across the metal bands which hold the joint sealer on the pallet. The seal shall cross the band securing the band to the cardboard underneath.

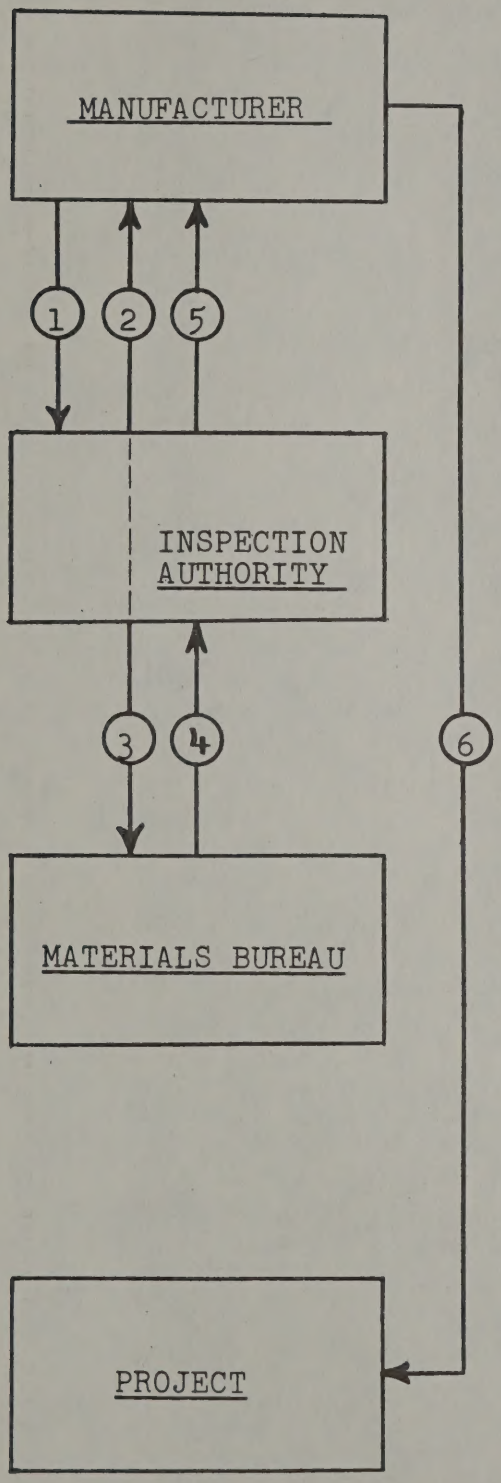
5. Application of Security Seals and Completion of Labeling of Accepted Pallets of Sealer (Replaces Steps 33 and 34 of Procedure A.).

The Plant Inspector shall secure pallets of accepted sealer by affixing green tape seals in the same manner as described for applying red tape seals. The Plant's Inspector shall also supervise the manufacturer in labeling the cardboard covering with the test number and date of acceptance.

FLOW CHART

PREFORMED ELASTIC JOINT SEALER

INSPECTION



(1) Notifies Inspection Authority of lot to be sampled.

(2) Samples lot and identifies by using RED seals.

(3) Submits sample for test using form BR 240.

(4) Issues acceptance.

(5) Notifies manufacturer of acceptance and identifies using green seals and labels.

(6) Ships to projects for incorporation into work.

PROJECT EVIDENCE OF ACCEPTABILITY

Intact RED seals
Intact GREEN seals
Completed label

INSTRUCTIONS:

1. Determine number of digits to be used that correspond with number of units to be sampled. (e.g. 500 units - use last three digits of each number in the table - 9685)

2. Starting anywhere in the table, select the units to be sampled by reading the numbers consectively that do not exceed total number of units in the lot.

(EXAMPLE - 500 units to be sampled with 5 samples needed. Presume you start on line 27, column 3 (#685). Since 685 is larger than the number of units in lot, go down col. 3 selecting numbers 64, 32, 187, 37 and 110. When counting units in lot, those units corresponding to these numbers would be sampled.)

RANDOM NUMBER TABLE

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1.	1306	1189	5731	3968	5606	5084	8947	3897	1636	7810
2.	0422	2431	0649	8085	5053	4722	6598	5044	9040	5121
3.	6597	2022	6168	5060	8656	6733	6364	7649	1871	4328
4.	7965	6541	5645	6243	7658	6903	9911	5740	7824	8520
5.	7695	6937	0406	8894	0441	8135	9797	7285	5905	9539
6.	5160	7851	8464	6789	3938	4197	6511	0407	9239	2232
7.	2961	0551	0539	8288	7478	7565	5581	5771	5442	8761
8.	1428	4183	4312	5445	4854	9157	9158	5218	1464	3634
9.	3666	5642	4539	1561	7849	7520	2547	0756	1206	2033
10.	6543	6799	7454	9052	6689	1946	2574	9386	0304	7945
11.	9975	3080	7423	3175	9377	6951	6591	8287	8994	5532
12.	4866	0956	7545	7723	8085	4948	2228	9583	4415	7065
13.	8239	7068	6694	5168	3117	1586	0237	6160	9585	1133
14.	8722	9191	3386	3443	0434	4586	4150	1224	6204	0937
15.	1330	9120	8785	8382	2929	7089	3109	6742	2468	7025
16.	2296	2952	4764	9070	6356	9192	4012	0618	2219	1109
17.	3582	7052	3132	4519	9250	2486	0830	8472	2160	7046
18.	5872	9207	7222	6494	8973	3545	6967	8490	5264	9821
19.	1134	6324	6201	3792	5651	0538	4676	2064	0584	7996
20.	1403	4497	7390	8503	8239	4236	8022	2914	4368	4529
21.	3393	7025	3381	3553	2128	1021	8353	6413	5161	8553
22.	1137	7896	3602	0060	7850	7626	0854	6565	4260	6220
23.	7437	5198	8772	6927	8527	6851	2709	5992	7383	1071
24.	8414	8820	3917	7238	9821	6073	6658	1280	9643	7761
25.	8398	5224	2749	7311	5740	9771	7826	9533	3800	4553
26.	0995	8935	2939	3092	2496	0359	0318	4697	7181	4035
27.	6657	0755	9685	4017	6581	7292	5643	5064	1142	1297
28.	8875	8369	7868	0190	9278	1709	4253	9346	4335	3769
29.	8399	6702	0586	6428	7985	2979	4513	1970	1989	3105
30.	6703	1024	2064	0393	6815	8502	1375	4171	6970	1201
31.	4730	1653	9032	9855	0957	7366	0325	5178	7959	5371
32.	8400	6834	3187	8688	1079	1480	6776	9888	7585	9998
33.	3647	8002	6726	0877	4552	3238	7542	7804	3933	9475
34.	6789	5197	8037	2354	9262	5497	0005	3986	1767	7981
35.	2630	2721	2810	2185	6323	5679	4931	8336	6662	3566
36.	1374	8625	1644	3342	1587	0762	6057	8011	2666	3759
37.	1572	7625	9110	4409	0239	7059	3415	5537	2250	7292
38.	9678	2877	7579	4935	0449	8119	6969	5383	1717	6719
39.	0882	6781	3538	4090	3092	2365	6001	3446	9985	6007
40.	0006	4205	2389	4365	1981	8158	7784	6256	3842	5603
41.	4611	9861	7916	9305	2074	9462	0254	4827	9198	3974
42.	1093	3784	4190	6332	1175	8599	9735	8584	6581	7194
43.	3374	3545	6865	8819	3342	1676	2264	6014	5012	2458
44.	3650	9676	1436	4374	4716	5548	8276	6235	6742	2154
45.	7292	5749	7977	7602	9205	3599	3880	9537	4423	2330
46.	2353	8319	2850	4026	3027	1708	3518	7034	7132	6903
47.	1094	2009	8919	5676	7283	4982	9642	7235	8167	3366
48.	0568	4002	0587	7165	1094	2006	7471	0940	4366	9554
49.	5606	4070	5233	4339	6543	6695	5799	5821	3953	9458
50.	8285	7537	1181	2300	5294	6892	1627	3372	1952	3028

From D. B. Owen's Handbook of Statistical Tables, 1962, Addison-Wesley, Reading, Mass., courtesy of the U. S. Atomic Energy Commission.

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